RESOURCE THEME DEFINITIONS

ARCHEOLOGIC RESOURCES

The resource themes used in this study are general statements of the various kinds of past human activity that are represented by sites or features within the State Parks System. These sites and features can be organized into three thematic categories—prehistoric archeological resources, historic archeological resources, and standing structures and other aboveground features.

Prehistoric Archeological Themes

For purposes of this planning document, the term prehistory refers to the period of time beginning with the initial entry of the Native Americans into what is now North Carolina (sometime prior to ca. 10,000 years ago) until ca. 1670 A.D., by which time European settlement of the North Carolina coast was well underway. A prehistoric archeological site is therefore defined as any location of prehistoric human activity. As such, a site may be identified by one or more artifacts or features made, modified, or used by prehistoric people. These sites can be divided into a series of generalized site types that reflect differing forms of human activity which can be identified by specific artifact patterns and features. These site types or themes (for consistency with the State Parks planning process) are defined as follows:

Village

Sites that possess the remains of domestic, ceremonial, subsistence and economic activities, and shelters indicative of year round habitation.

Campsite/Activity Area

Sites that consist of the remains of domestic, subsistence and economic activities, and shelters indicative of short-term habitation, or of behavior associated with specific domestic, subsistence, or economic activities. Examples include, but are not limited to, temporary habitation sites, hunting sites, butchery sites, and wild plant gathering sites such as those associated with harvesting nut resources.

Shell Midden

Sites that consist of the remains of shellfish gathering mixed with the remains of other domestic, subsistence and economic activities, with the mussel shell being the primary component of the remains.

Burial/Cemetery

Sites that consist of one or more human burials, and the material remains placed with the individual interments. Usually, but not always, prehistoric burials/cemeteries exist as part of some other archeological site, especially villages and campsites.

Quarry/Soapstone

A specialized economic site that shows evidence of activity directed toward the extraction of soapstone from the ground for trade or for later fashioning into artifacts such as bowls and ornaments. This site could show evidence of the actual sources of the soapstone mined, and/or the artifacts used to extract the soapstone. The habitation area used by the soapstone miners would be classified as a Campsite/Activity Area, or possibly a Village.

Quarry/Other

A specialized economic site that shows evidence of activity directed toward the extraction of some stone (excluding soapstone), such as quartz, rhyolite, or slate, from the ground for trade or for later fashioning into artifacts such as projectile points, scrapers, and blades. This site could consist of the actual source of the stone mined, the artifacts used to extract the stone, and examples of the stone actually mined. The habitation area used by the stone miners would be classified as a Campsite/Activity Area or possibly a Village.

Shelter/Cave

A site that consists of a natural rock shelter, rock overhang or cave showing evidence of having been used as a temporary or permanent habitation area. The remains of domestic, economic and subsistence activities would be present.

Rock Art

A site that consists of drawings, sketches, or engravings executed by prehistoric peoples on stone (such as rock outcrops and the walls of rock shelters and caves).

Trail/Path

A site used by prehistoric peoples as a route of land travel. A good example is the Occaneechi Trail that can be tentatively identified with certain existing roads in the Eno River State Park. The Occaneechi Trail connected the prehistoric and historic Indian groups of the North Carolina Piedmont with the Indians of the Chesapeake, the North Carolina Coast, and the South Carolina Piedmont. It was also a trail used by European traders during early historic times, approximately A.D. 1670 to 1750, to conduct trade with the Indians of the interior of the Southeastern United States.

Underwater

A preserved underwater site that shows evidence of any prehistoric human behavior associated with habitation, subsistence and/or economic activities. Examples include, but are not limited to, the submerged prehistoric canoes and other artifacts including pottery recovered from Lake Phelps.

Other

Any site that shows evidence of human activity that can not be associated with any of the other prehistoric themes.

Historic Archeological and Standing Structure Themes

For purposes of this planning document the term "historic" refers to the period of time beginning with the European settlement of what is now North Carolina (about the mid-seventeenth century). A historic archeological site is defined as any location of past human activity associated with historic Indians, Afro-Americans, and Euro-Americans and are generally identified by the material remains (artifacts and features) associated with them. These sites can be divided into a series of generalized site types that reflect differing forms of human activity that can be identified by specific artifact patterns and features. The theme definitions used for Standing Structures (which are the result of a specific type of human activity) are the same as those used for historic archeological resources. The themes in this case reflect different building types. These site types and building types or themes (for consistency with the State Parks planning process) are defined below:

Recreation

Structures and/or sites related to the early development of the State parks System or to earlier private or local parks that preceded the state system, including but not limited to camp structures, sleeping cabins, picnic shelters, lodge halls, bathhouses, and related facilities. Also included would be early Euro-American and Afro-American structures or sites used for leisure or amusement activities such as race tracks, baseball fields, mineral springs, fishing cabins, and any landscaping associated with these features.

Public Works

Facilities or the archeological remains of facilities constructed by local, state, and federal governments as part of public works projects, particularly the CCC, including but not limited to dams and other engineering facilities and including support facilities such as barracks, mess halls, bathhouses, etc. not subsequently used for public recreation, and any associated landscape features.

Public/Civic/Religious

Standing structures and/or sites built for community purposes, including but not limited to churches, lodge/fraternal halls, schools, post offices, and other government facilities, and any associated landscape features.

Commercial

Structures and/or sites related to the exchange of goods including but not limited to store buildings, wharfs, and any associated landscape features.

Urban/Domestic

Dwelling houses and/or the archeological remains of dwelling houses in a town or village setting, including all support structures such as sheds, garages, garden or animal facilities and any associated landscape features such as fences, plantings, walls, arbors, etc.

Rural/Domestic

Dwelling structures and sites associated primarily with the agricultural economy, including farm and plantation houses and all their support facilities, including but not limited to barns, granaries, privies, smokehouses, cribs, sheds, spring houses, and similar structures. Also included would be irrigation canals and ditches, trappers cabins and their support structures and any associated landscape features such as fences, plantings, walls, etc.

Cemetery

Burial sites with associated above-ground features, including stones and markers, fences and walls, and associated landscaping.

Industrial

Structures or sites associated with the extraction of resources or the manufacture of materials or goods, including but not limited to mines, furnaces, distilleries, and factories. (Excepting mill sites—see below.)

Mills

Structures and/or sites associated with the grinding of corn and grains or the cutting of lumber including but not limited to mill buildings, dams, sluices, storage buildings, related support structures and any associated landscape features.

Transportation

Roadbeds, bridges, landing docks, canals, lighthouses, and similar features or sites related to transportation.

Military

Forts and fortifications, earthworks, battlefields, barracks, magazines, commissaries, and other features and sites related to defense of territory.

Underwater

Lost or abandoned vessels or structural part of these vessels and structures built in the water such as docks, wharfs, dams, bridges, mill sites, lighthouses, and fish traps. Also included are inundated land sites and cultural material that is intentionally or accidentally deposited in the water particularly in areas such as river crossings, landing sites and city or town water fronts.

Other

Any structure or site that shows evidence of human activity that cannot be associated with any of the other historic themes.

BIOLOGIC RESOURCES

Over 116 natural community types have been identified and described in North Carolina (Schafale and Weakley, 1990). These have been grouped into 32 biological themes based on similarities in environment and vegetation. Each of the themes is described more fully in the Natural Heritage Program Biennial Protection Plan (Division of Parks and Recreation, 1993).

Spruce-Fir Forests

Forests dominated by red spruce and Fraser fir occur on the high mountain tops in western North Carolina, generally over 5500 feet in elevation. They provide habitat for large numbers of both endemic Southern Appalachian and disjunct northern species of plants and animals. This theme is represented in the parks system at Mount Mitchell. The park contains good examples of the Fraser Fir Forest natural community, but contains little of the Red Spruce-Fraser Fir Forest found at slightly lower elevations. Like spruce-fir forests elsewhere, the forests in the park have been drastically changed by the balsam woolly adelgid, an introduced insect pest.

Grass and Heath Balds

Balds are treeless shrub or herb-dominated communities of the high mountains. Grassy balds are open meadows with a diverse mixture of species. Heath balds are dense thickets of tall shrubs, mostly rhododendron, mountain laurel, and other members of the heath family. The state parks system includes only small amounts of heath bald at Mount Mitchell, and no examples of grassy bald in any of the parks.

Northern Hardwood Forests

Northern hardwood forests are found on high mountain slopes with a cool climate and high levels of rainfall. They are dominated by combinations of moist-site hardwoods, such as yellow birch, beech, buckeye, and sugar maple. A good example of northern hardwood forest is found at Mount Jefferson, but the parks system does not include representation of the range of diversity in this broad theme.

Mountain Cove Forests

Cove forests are relatively stable, uneven-aged climax forests, with trees up to several centuries old, occurring on sheltered, moist, low to moderate elevation sites. They have a dense canopy of moisture loving trees and a high diversity in all vegetation layers. The state parks system includes small examples of cove forests at South Mountains and Stone Mountain, but includes no examples of the more typical mountain version and no examples of Canada Hemlock Forest.

Piedmont and Coastal Plain Mesic Forests

Mesic forests occur on sites that are moist but not wet. These sites are among the most favorable environments in these regions for plant growth. They tend to support dense forests of beech, tulip poplar, red oak, and other moisture-loving trees. In the Piedmont and Coastal Plain, mesic sites often contain species

that are more common in the mountainous parts of the state or farther north. Good examples of acidic Mesic forests are found at Merchants Millpond, Eno River, William B. Umstead, Cliffs of the Neuse, and other parks. A good, though small, example of basic Mesic forest occurs at Raven Rock.

Piedmont and Mountain Dry Coniferous Woodlands

The vast majority of relatively undisturbed land in the Piedmont and Mountain regions is dominated by hardwood forests. While successional pine forests are very common, naturally occurring pine and Carolina hemlock forests are uncommon. They occur at mid to low elevations in specialized sites that are drier than average. They are found primarily in the mountains and in a few mountain-like sites in the Piedmont. South Mountains and Stone Mountain contain good examples of dry coniferous woodlands, but higher elevation examples are not represented in the parks system.

Montane Oak Forests

Montane oak forests, which once had chestnut as a codominant, occupy much of the landscape of the Mountain region, covering the dry to intermediate slopes and ridgetops over a broad elevational range. Some montane oak forests are found at Mount Jefferson, and good examples of the foothills version occur at South Mountains and Stone Mountain, but there is inadequate representation of several montane oak community types in the parks system. This theme is scarce in the Piedmont, but excellent examples occur at Hanging Rock and Pilot Mountain.

Piedmont and Coastal Plain Oak Forests

Oak forests were once the most common natural community type in the Piedmont, occurring over most of the uplands. In the Coastal Plain they were much more limited, occurring primarily in dissected areas near streams. Although still widespread, Piedmont and Coastal Plain oak forests have been substantially reduced from presettlement times. The parks system contains excellent representation of acidic types of this theme at several parks, but has little representation of basic types.

High Elevation Rock Outcrops

These communities occur on ridgetops, peaks, and upper slopes where soils are thin and discontinuous, vegetation is very patchy, and rock dominates the surface. Even in the most rugged high mountains they represent only a small fraction of the landscape. Mount Mitchell and Mount Jefferson contain good examples of this theme; however, the parks system does not include any examples of the High Elevation Granitic Dome community type.

Low Elevation Cliffs and Rock Outcrops

This broad theme contains a wide variety of community types that are too steep or rocky to support a closed tree canopy. Vegetation is generally very patchy, reflecting wide variability in soil depth, rock chemistry, and available moisture. The parks system contains excellent representation of several rock outcrop community types, although representation is not as good for the calcareous and mafic types.

Coastal Plain Marl Outcrop

This theme is very rare in North Carolina. Coastal Plain marl outcrops generally occur along stream bluffs or in ravines. Some are true marl while others are coquina or other kinds of limestone. Trees include calcium-loving species such as black walnut, southern sugar maple, and pawpaw, as well as more widespread moisture-loving species such as beech and tulip poplar. This theme is not represented in the parks system. An example of this theme occurs along the north shore of Lake Waccamaw, but this area is not included within the park boundaries.

Granitic Flatrocks

Granitic flatrock communities occur on flat to gently sloping exfoliated outcrops of granitic rocks in the Piedmont. The rock outcrop is generally flush with the surrounding soil and has only minor irregularities. Vegetation is sparse and patchy, and includes several species found in no other communities. Mitchells Mill contains an excellent example of this theme. Several small examples occur at Raven Rock.

Mafic Glades and Barrens

The communities in this theme are non-forested communities that occur on relatively flat outcrops of unusual, high pH rock types. All have vegetation kept open by the physical structure and chemistry of the rock. These communities have high concentrations of rare plant species. Only a handful of examples of this theme are known in North Carolina, and none of these are currently included within the state parks system.

Maritime Grasslands

This theme includes the dunes, sandy flats, and dune swales along the coast. These communities are unable to support trees because of heavy salt spray or overwash by salt water during storms. Excellent examples of this theme occur at Baldhead Island and Hammocks Beach.

Maritime Upland Forests

This theme includes well-developed forests with canopies of live oak, sand laurel oak, and loblolly pine. It also includes the distinctive scrubby woody growth of stabilized sand dunes and sand flats. Most maritime forests are found on the barrier islands, but a few areas on the mainland share the characteristic species. The state parks system includes several small, but good examples of maritime forest. Extensive examples are lacking, as are several of the rarer community types.

Dry Longleaf Pine Communities

Longleaf pine communities are scattered in most of the Coastal Plain and extend into the Piedmont in the south. They were once the most abundant vegetation type in the Coastal Plain, occupying vast acreages and exhibiting considerable diversity based on moisture, soil, and location. Good examples of this theme exist at Carolina Beach, Jones Lake, Singletary Lake, Baytree Lake, and Weymouth Woods. Several important variants are not represented, particularly in the Sandhills.

Blackwater Coastal Plain Floodplains

This theme includes the vegetated communities that occur on the floodplains of blackwater rivers. Blackwater rivers originate in the Coastal Plain, rather than in the Piedmont or Mountains. They carry little mineral sediment, and the water is generally very acidic and low in nutrients. The forests contain flood-tolerant trees and shrubs, are typically low in diversity, and can cover large areas. The state parks system contains good examples of this theme at Merchants Millpond, Lake Waccamaw, and a few other small areas. Acquisitions at Lumber River will add examples of this theme to the system.

Brownwater Coastal Plain Floodplains

Brownwater rivers originate in the Piedmont or Mountains and flow into the Coastal Plain. In contrast to blackwater rivers, they carry heavy loads of mineral sediment, particularly clay and silt. The water is generally near neutral in pH and high in nutrients. Sediment deposition in the floodplain often results in topographic relief such as levees, bars, and sloughs. Representation of this theme in the parks system is minimal, with a small example at Cliffs of the Neuse.

Piedmont and Mountain Floodplains

Floodplains in the Piedmont and mountains tend to be narrow, infrequently inundated, and generally lacking in depositional landforms. The forests contain mixtures of bottomland and moisture-loving species. Small depressions in the floodplain sometimes form pools that provide important amphibian breeding habitat. The state parks system contains good examples of some of the community types in this theme, but the Montane Alluvial Forest community type has little representation and the Piedmont/Mountain Swamp Forest is essentially unrepresented.

Riverine Aquatic Communities

This theme includes all perennial, flowing water ecosystems—all rivers, creeks and streams. These aquatic systems are of great ecological importance. Riverine communities are highly diverse, ranging from mountain torrents to placid and meandering Coastal Plain rivers. Animals, rather than plants, tend to be the most conspicuous members of the communities. Many state parks are located adjacent to rivers, and many contain streams and creeks. However, few of the aquatic communities themselves are well-protected. The parks system includes only four State Rivers, and entire watersheds are included in only a few parks.

Mountain Bogs and Fens

Montane bogs are among the rarest natural communities in the Southern Appalachians and in North Carolina. Bogs form in poorly drained depressions or on gentle slopes. They vary from being permanently wet to intermittently dry and are generally fed by seepage. Vegetation is generally a mosaic of shrub thickets and herb dominated areas. The state parks system contains no examples of mountain bogs.

Upland Seepages and Spray Cliffs

The communities in this theme are small wetlands that occur on sloping uplands in the Piedmont and Mountain regions. The soils are generally saturated permanently or for long periods. Spray cliffs are kept wet by waterfalls; the other community types in this theme are fed by seepage. Spray cliffs are represented in the parks system at Hanging Rock, South Mountains, and Stone Mountain. There are few examples of seeps in the state parks system.

Piedmont Upland Pools and Depressions

These are shallow depressions which hold water in the wetter parts of the year. They generally dry up by the end of summer, but are flooded long enough to contain wetland vegetation which contrasts with the surrounding uplands. Most occur in the Piedmont. Morrow Mountain contains one small example of this theme, but representation in the parks system is otherwise absent.

Coastal Plain Nonalluvial Mineral Wetlands

Nonalluvial mineral wetlands occur on flat, poorly drained areas of the outer Coastal Plain and occasionally in shallow depressions such as Carolina bays. The soils in these sites are saturated in the wetter seasons and may have shallow standing water. Vegetation is dominated by cypress, black gum, or other wetland hardwoods. In the state parks system, this theme is represented only at Dismal Swamp.

Peatland Pocosins

Peatlands occur on nearly flat, poorly drained areas of the outer Coastal Plain and in large shallow depressions such as Carolina bays. Peat deposits develop where the soil is saturated for long enough periods that organic matter cannot completely decompose. The peat acts as a sponge, raising water levels in the soil, which is extremely infertile and acidic. Vegetation includes stunted pond pines and low shrubs, often with areas of sphagnum and pitcher plants. Pocosins are represented in the parks system at Dismal Swamp, Pettigrew, and several of the Carolina bay parks.

Streamhead Pocosins

These communities have vegetation similar to peatland pocosins, but the physical setting is very different. They occur in ravines in dissected, sandy Coastal Plain terrain. The soils are mucky, very acidic and infertile. The streamhead pocosin theme is represented at Weymouth Woods. Better representation is needed in the Sandhills, where most examples of this theme exist.

Wet Pine Savannas

The communities in this theme are Coastal Plain mineral soils wetlands that in presettlement times were frequently burned. With frequent fire, they have an open canopy of longleaf or pond pine over a grassy herb layer. They often contain a high diversity of herbaceous plants, including showy wildflowers and insectivorous plants. Shrubs are short and sparse with frequent fire, but become dense if fire is suppressed

more than a couple of years. Examples of this theme occur at Carolina Beach and Jones Lake, but the diversity of wet pine savanna communities is not well represented.

Coastal Plain Depression Communities

These occur in various kinds of small basins in Coastal Plain uplands. The basins, which may be limesink depressions, Carolina bays, or swales between recent or older sand dunes, hold standing water for substantial parts of the year. Vegetation is often strongly zoned and varies widely. Carolina Beach contains excellent examples of several limesink types. Theodore Roosevelt and Bushy Lake also contain small examples.

Natural Lake Communities

Natural lakes occur only in the Tidewater and Coastal Plain part of North Carolina. Some lake basins are Carolina bays, while others are depressions in peatlands that may have been created by deep peat burns or other causes. Most of the lakes in North Carolina are very acidic. Lake Phelps, Lake Waccamaw, Jones Lake, Singletary Lake, and the other state lakes represent the diversity of this theme.

Maritime Wetland Forests

Maritime wetland forests occur in wet sites on barrier islands and near the sounds on the mainland. They are generally sheltered from the most extreme salt spray and from seawater overwash. The soils are saturated for much of the year. This rare theme includes forests and shrub communities. Examples exist at Fort Macon and Theodore Roosevelt, but the acreages are small.

Freshwater Tidal Wetlands

Freshwater tidal wetlands occur in sites where flooding occurs in response to lunar or wind tides, but the water has less than 0.5 parts per thousand salt content. They are found on rivers near the coast and along the large sounds. Good to excellent examples of this theme are found at Goose Creek and Chowan Swamp.

Estuarine Communities

Estuarine communities are affected by tidal waters in and along the sounds and drowned river mouths. Salt marshes, brackish marshes, salt flats, and salt shrubs occur depending upon the frequency and duration of salt water flooding. This theme is well represented in the parks system at Fort Macon, Hammocks Beach, Fort Fisher and Baldhead Island.

GEOLOGIC RESOURCES

Barrier Islands and Shoreline

Geomorphic features created by wind and waves at the coast during Holocene times, both on barrier islands and on sections of the mainland coast where barriers are absent. They include beach, foredunes, active and stabilized rear dunes, overwash deposits, interdune ponds and swamps, inlets, sand spits, capes, relict inlets, active flood and ebb tidal deltas.

Estuaries

Geomorphic features associated with tidally influenced areas in lagoons behind barrier islands and in drowned river mouths. They include regularly and irregularly flooded tidal marshes, estuarine swamps, tidal channels, open water with sand and mud bottom, shell beds, relict flood tidal deltas, and estuarine beaches.

Continental Shelf

Geomorphic features of offshore areas. They include soft bottom areas and erosional marl outcrops characterized by low scarps.

Relict Coastal Features

Geomorphic features created by coastal processes before the Holocene, at higher stands of sea level than at present. They include Coastal Plain scarps and terraces, relict beach ridges, and dune systems.

Carolina Bays

Oriented elliptical depressions. They include water-filled, peat-filled, sandy, and clay-based bay interiors, sand rims, and associated aeolian sand deposits.

Fluvial Depositional Features

Geomorphic features produced by alluvial processes of streams and rivers on floodplains and in river channels, primarily in areas of relatively non-resistant rock. They include mud, sand, and gravel bars, natural levees, point bars, sloughs, ridge and swale systems, oxbows, relict terraces with ridge and swale systems, sloughs, etc., terrace slopes, and coastal plain blackwater stream swamps.

Peatlands and Interstream Wetlands

Areas saturated by non-flowing water for large parts of the year, because of blocked drainage or flat topography without drainage. They include peat domes, other peatlands, upland swamps, and peat deposits in Carolina bays.

Natural Lakes and Ponds

Natural bodies of fresh water in depressions of various origin. They include lakes in peatlands and Carolina bays and ponds in naturally blocked drainage systems and sinkholes or dolines, with associated shallow nearshore areas, beaches, and erosional shorelines.

Caves, Sinks, and Springs

Features produced by solution of rock and other effects of ground water. They include solution caves, speleothems, sinkholes, dolines, natural bridges, and other karst features, and flowing and seeping springs produced by ground water flow in solution cavities, fractured bedrock, saprolite, and sand.

Dissected Uplands

Upland areas with well-developed drainage, showing the effects of the common surface geomorphic processes operating on most of the state's landscape. They include upland ridges, ravines, and slopes along streams, underlain by bedrock, saprolite, or colluvium.

Inselbergs (Monadnocks)

Isolated erosional remnants. They include isolated hills and mountains of unusually resistant rocks and outliers of the Blue Ridge escarpment.

Cliffs

Steep to vertical or overhanging slopes of exposed rock. They include cliffs of resistant rock on high peaks and ridges, and cliffs produced by streams and rivers.

Exfoliation Features

Geomorphic features produced by exfoliation or spalling in hard, generally granite-like rocks. They include flatrocks, dome-shaped mountains and rock faces, and weathering pits which are most commonly formed on exfoliation surfaces.

Gorges, Rapids, and Waterfalls

Features produced by stream erosion in high to moderate relief terrain or resistant rock. They include steep-walled gorges, waterfalls, waterfall pools, rapids over bedrock, rapids over boulder deposits, and potholes.

Mass Wasting Features

Landforms illustrating features produced by mass wasting phenomena. They include debris avalanches, tracks, and deposits, earth flows, slumps, talus slopes, and relict periglacial features such as boulder fields and nivation cirques.

Faults, Joints, and Related Features

Areas illustrating results of faulting and jointing, either directly or indirectly. They include visible high angle and thrust faults, sheared and cataclastic rocks, large fault-produced features such as windows, fault zones, horsts, and grabens, fissure caves, joint or fault-controlled drainage, and other landforms showing effects of faults or joints.

Folds and Related Features

Areas illustrating results of folding, either directly or indirectly. They include folds visible in outcrops and series of outcrops, and landforms produced by differential erosion in folded rocks.

Intrusions

Areas illustrating intrusive igneous bodies. They include batholiths, dikes, sills, ring dikes, and other kinds of plutons, of granitic rocks, syenite, diorite, diabase, gabbro, and ultramafic rocks.

Volcanic Features

Areas illustrating features produced by extrusive igneous activity. They include lava flows, breccias, tuffs, lahars, pillow lavas, and other features visible in outcrops or expressed in landforms.

Metamorphic Features

Areas illustrating characteristic minerals, textures, and structures produced by metamorphic processes. They include rocks of different initial composition,
metamorphosed to different degrees.

Sedimentary Features

Areas illustrating sedimentary stratigraphy, rock types, sedimentary structures, and depostional environments. They include sandstone, dolomite, mudstone, graywacke, fanglomerate, arkose, lake shale, coastal plain sand and shale, marl, coquina, representative strata of different ages or formations of the Coastal Plain, Triassic Basins, Carolina Slate Belt, and windows in the Blue Ridge.

Fossils

They include representatives of the range of fossil types, animal and plant, marine and terrestrial, different types of preservation, and different ages.

Unusual Rock Types

Outcrops of rock types rare in North Carolina or in the region. They include ultramafic rocks, dolomite, marble, limestone, and orbicular diorite and notable occurrences of unusual minerals.

GLOSSARY OF GEOLOGIC TERMS

Aeolian: Deposited or reworked by wind.

Batholith: A large body of intrusive rock frequently covering many square miles of area and extending to great depth.

Breccia (volcanic): A rock consisting of broken rock fragments produced by volcanic eruptions, with rock fragments greater than 32 millimeters in size.

Dike: A narrow vertical body of intrusive rock, appearing in outcrop as a narrow line.

Doline: A depression on the land surface caused by collapse of surficial sediments into a void created by solution of limestone underground.

Drowned river mouth: Lower reach of a river valley, now occupied by tidal estuarine waters. These valleys were formed when sea level was lower and were inundated when sea level rose.

Graben: A block of rock lowered relative to adjacent areas by vertical fault movement.

Holocene: The most recent period of geologic time, extending from the end of the last ice age (10,000 years ago) to the present.

Horst: A block of rock uplifted relative to adjacent areas by vertical fault movement.

Lahar: A deposit produced by landslides of volcanic ash on the flank of a volcano.

Marl: A sedimentary rock consisting of clay with abundant calcium carbonate material in the form of shells or shell fragments. The term is also frequently used in North Carolina to refer to rocks made up largely of shells.

Mass wasting: A series of geomorphic processes involving movement of large masses of earth material by gravity, either slowly or quickly.

Nivation cirque: A rounded basin-like landform produced by periglacial processes around permanent snowfields.

Periglacial: A series of geomorphic processes resulting from repeated freezing and thawing under cold climate, as occurred during the ice age.

Pluton: General term for bodies of intrusive igneous rock.

Ring dike: A narrow, ring-shaped body of intrusive rock, as in the syenite ring dike in Cabarrus County.

Sand spit: A small point of land or narrow shoal projecting from the shore.

Saprolite: A soft, earthy, clay-rich, thoroughly decomposed rock formed in place by weathering.

Scarp (Coastal Plain): A relatively steeply sloping area on the Coastal Plain or Continental Shelf, believed to have been formed by coastal processes in the past.

Sill: A thin, horizontal body of intrusive rock. Unlike a dike, it may cover a large area in outcrop.

Slough: An elongate depression in a floodplain that occurs at a former location of a river channel.

Spalling: Breaking in layers parallel to the surface, as sometimes occurs in granite and related rocks.

Speleothem: A cave formation, such as a stalactite or stalagmite.

Tuff: A volcanic rock consisting of broken rock fragments produced by volcanic eruptions, with fragments generally less than four millimeters in size.

GLOSSARY OF SCENIC RESOURCE TERMS

Scenic Vistas: The view from a natural or man-made resource.

Reservoirs/Lakes: The view of a body of flat water.

Waterfalls: The view of a steep descent of water from a height.

Rivers: The view of a large natural stream of water emptying into an ocean, lake, or other body of water, and usually fed along its course by converging tributaries.

Whitewater Streams: The view of a cascading body of running water.

Bays And Estuaries: The view of either a coastal flat body of water enclosed by land but having an outlet to the ocean or the lower portion of a river where its current is met and influenced by the tides.

Seashores: The view of a tract of land adjacent to the ocean.

Forests: The view of a dense growth of trees, together with other plants, covering a large area.

Meadows And Grasslands: The view of a tract of grass covered land.

Swamps: The view of a lowland region saturated with water and primarily vegetated with trees.

Pocosins: The view of a shallow swampy depression vegetated chiefly with shrubs.

Marshes: The view of a low lying wetland vegetated primarily with grasses.

Gorges: The view of a deep, narrow passage with precipitous rocky sides often enclosed between mountains.

Rock Outcroppings: The view of an expansive natural stone formation occurring either vertically or horizontally.

Islands: The view of a body of land surrounded on all sides by salt or fresh water.

Caves and Cliffs: The view of geologic formations of either a hollow beneath the earth's surface or of a vertical rock wall.

Scenic Highways: The view from a highway or road of visually diverse and natural or man-made phenomena.